Course Outline for Physics 232: Computational Methods of Physics

I. Philosophy of Course

Students should learn the most effective ways to use PCs to meet their needs. Emphasis will be on the following:

- Using the WWW and Internet as resources for research and collaborations.
- Making appropriate choice of programming languages, spread sheet, or math packages for solving computational problems.
- Exposure and practice in performing computer simulations and modeling.
- Exposure and practice in interfacing computers to measuring devices.

II. Course Goals

- Make students aware of inherent advantages and disadvantages of programming, spreadsheets, and math packages.
- Make students aware of FORTRAN, Excel, and MAPLE.
- Relate exercise when possible to Physics 221 and 222 problems and labs.
- Require about three hours per week of work from the student.

III. Grades based on

- A log book of the student's errors and successes.
- In-class exercises.
- Final report.

IV. Schedule Overview

Week Number	**Topic**
1	DOS, Windows, Vincent
2	WWW and Internet
3-8	Spreadsheets, FORTRAN, MAPLE
9	mid-term project
10-13	Interfacing
14	Final Project